

5/20

DART AEROSPACE LTD	Work Order:	23051
Description: Panel	Part Number:	D3330-5
Dwg: D3330 Rev. A PAGE 5	Qty:	15
Ref: RF 05.01.17		Page 1 of 1

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveler	RF	05.04.15	15
2	PG	Issue P/O: <u>200 1923</u> Email or Ship DXF file to vendor Laser Cut flat pattern per Dwg D3330 Possible Supplier: Industrial Laser Material release note is required	U	05.04.20	15
3	RG	Receive and Inspect for transit damage Ensure material release note is attached	CL	05/05/16	15
4	QC6	Inspect dimensions as per Dwg D3330 OR D3330-STI TEMPLATE	MA	05/05/25	15
5	GA	Deburr	CPL	05/05/25	15
6	GB	Form as per Dwg D3330	2 CPL	05/05/26	15
7	QC5	Inspect work to Step 6	MA	05/05/26	15
8	ST	Identify and Stock	CPL	05/05/26	15
9	AC	Cost / part: <u>17.72</u>	Sgt	05-05-31	15
10	DC	Close W/O <u>16.65</u> Inspect Level 21	RF	05.06.03	15

Rev	Date	Change	Revised By	Approved
A	05.01.13	New issue	KJ/JLM	

RELEASED  
05.01.17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

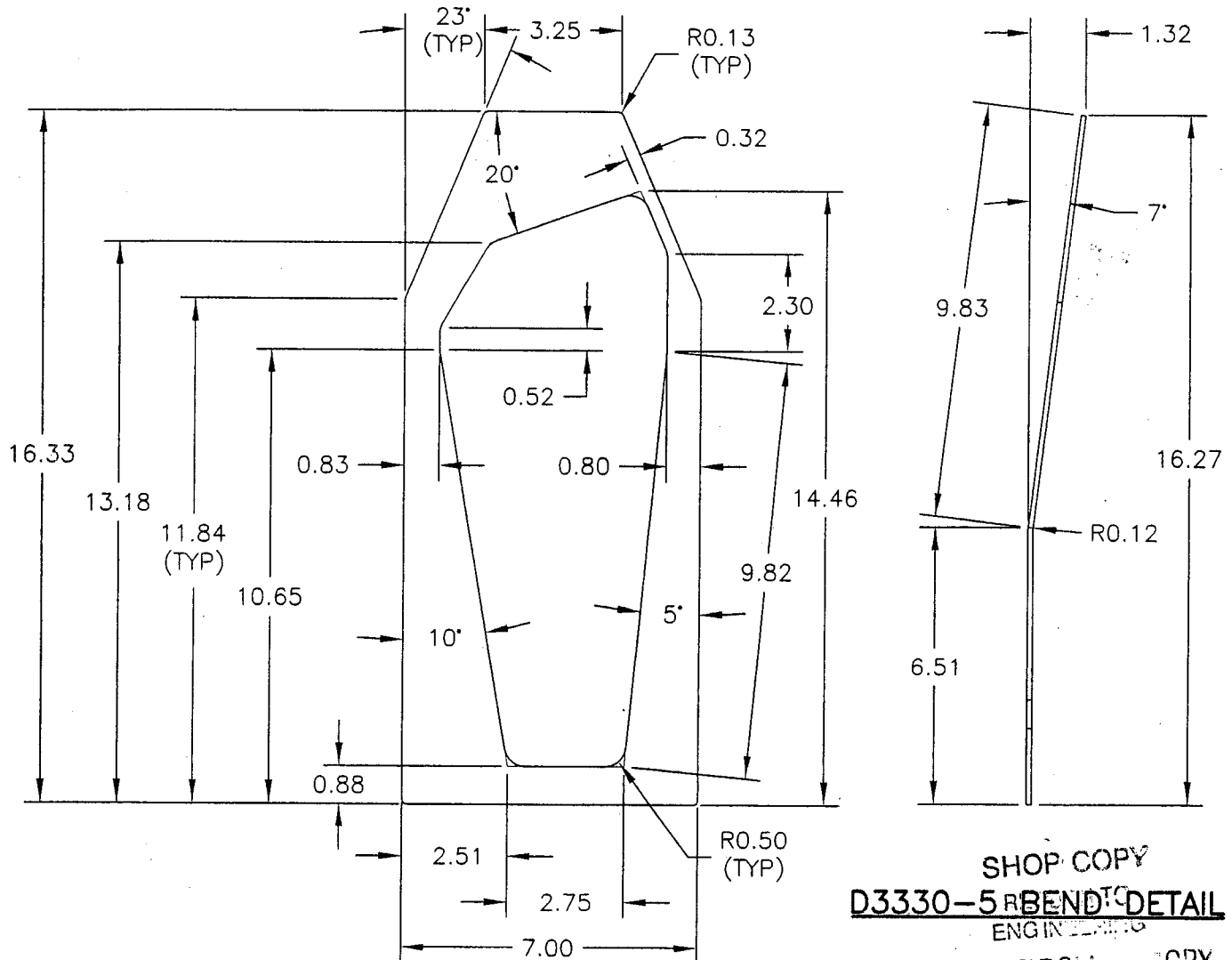
NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_



PRELIMINARY ISSUE

DESIGN 43	DRAWN BY 43	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED 73	APPROVED	DRAWING NO. D3330	REV. B SHEET 5 OF 9
DATE 05.02.26		TITLE FRAME WELDMENT	SCALE 1:4



**FLAT PATTERN**

SHOP COPY  
**D3330-5 RBEND TO DETAIL**  
ENGINEERING

UNCONTROLLED COPY  
SUBJECT TO CHANGE  
WITHOUT NOTICE

WORK ORDER

NO. 23051

**NOTES:**

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 11 GAUGE (0.125 THICK)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.010

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# Job Costing Report

Dart Aerospace Ltd.  
Hawkesbury

Apr 12, 2005  
02:25 pm

Work Order No : 0023051  
Project Name : D3330-5  
Project For : WK520  
Work Order Type : Main  
Main WO Number :  
House Part Number : D3330-5  
Description : Rail  
Manufactured : Yes  
Amount Req'd : 15  
Amount Done : 0  
Start Date : 04-12-05  
Est Finish Date : 05-15-05  
Act Finish Date :  
Drawings Req'd : No  
Ok for Approval :  
Approval Rec'd :

Department Code:  
Burden Flags : NNNNNNNN  
WO Status : Open  
Invoice State : Not Invoiced  
Invoice Date :  
Invoice Number :  
Invoice Amount : 0.00  
Order Entry No :  
OE Value : 0.00  
Est Mark Up : 0.000%  
Actual Mark Up : 0.000%  
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	0.00	0.00		
Mark up :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00



BHP New Zealand Steel Limited  
Glenbrook, South Auckland  
Postal: Private Bag 92121, Auckland 1, New Zealand  
Telephones: (09) 3758 999 Auckland  
(09) 2358 089 Wauku  
Fax: (09) 3758 959 Telex: 24936

# TEST CERTIFICATE

Ref: 9652301

CUSTOMER	Wilkinson	P00821ME001	SPECIFICATION	ASTMA569	CERTIFICATE No	TC027066																		
CUSTOMER O/N	90-31N-067		PRODUCT	HOT ROLLED PICKLED & OILED	PAGE	1 of 1																		
MILL O/	256321		DIMENSIONS	0.119" x 48" x Coil	DATE	22 November 2000																		
PACK NUMBER	HEAT No	CHEMICAL COMPOSITION PERCENT																MECHANICAL TESTS (TEST SPECIFICATION - ASTMA370)						
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	Al	B	N2	CE( )	BEND	YIELD	T.S.	%ELONG	HARDNESS	r	LENGTH
		x100				x1000								x10000		x100		180°				G.L.=		( )
HP-720792-00	602612	6	TR	21	9	18	12	18	22	4	6	1						Good						820
HP-720793-00	602612	6	TR	21	9	18	12	18	22	4	6	1						Good						827
HP-720794-00	602612	6	TR	21	9	18	12	18	22	4	6	1						Good						817
HP-720795-00	602612	6	TR	21	9	18	12	18	22	4	6	1						Good						830
HP-720796-00	602612	6	TR	21	9	18	12	18	22	4	6	1						Good						807
HP-720797-00	602612	6	TR	21	9	18	12	18	22	4	6	1						Good						810

YIELD (A)=0.2% PROOF STRESS (B)=LOWER YIELD STRESS	GAUGE LENGTH (G.L.) (A)=200mm (C)=80mm (E)=2" (B)=50mm (D)=5.65 √ So (F)=8"	PLASTIC STRAIN RATIO (r) (A)=r0 (C)=r45 (B)=r90 (D)=(r0+r90+2r45) / 4	IMPACT TEST (A)=10mm x 10mm (C)=5mm x 5mm (B)=7.5mm x (D)=2.5mm x	CARBON EQUIVALENT VALUE (CE) (A)=C+Mn/6 (C)=C+Mn/6+Si/24 (B)=C+Mn/6+(Cr+V+Mo)/5+(Cu+Ni)/15 (D)=
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WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN TESTED AND INSPECTED  
WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION

APPROVED

Satish Misra  
QC METALLURGIST